

Hycult biotechnology

ENDOBLOCK LIPOPOLYSACCHARIDE BINDING PROTEIN (LBP) ELISA Kit

Catalog No. HIT301

Quantity : 1 x 96 determinations

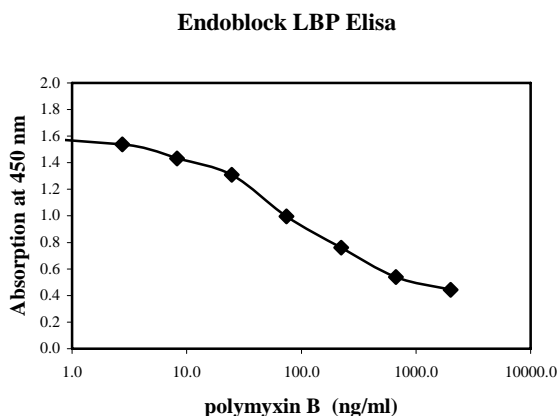
Description Lipopolysaccharide (LPS) Binding Protein (LBP) is a type 1 acute phase protein that is constitutively produced by the liver and rapidly up-regulated during the acute phase response. The protein catalyses the monomerization of LPS and its transfer to (s)CD14 and to lipoproteins. In this way, LBP has both a role in the activation pathway of LPS i.e. activation of monocytes by LPS leading to release of inflammatory mediators and in the neutralization of LPS i.e. the uptake of LPS by lipoprotein and subsequent clearing. The Endoblock assay has been developed for the detection of compounds that inhibit binding of endotoxin to LBP.

A wide range of compounds ranging from Polymyxin B to endotoxin toxicity reducing peptides have been shown to share the common property that they prevent endotoxins from binding to LBP. The assay is based upon the inhibition principle: addition of a compound that competes with LBP for binding to LPS leads to reduction of binding of biotin labeled LPS which is detected by a HRP labeled conjugate.

Application The Hbt Endoblock LBP ELISA has been developed for the qualitative determination of the endotoxin toxicity inhibitory capacity of natural or synthetic compounds. The minimum detection level of inhibitory capacity of Polymyxin B and the measurable concentration range of Polymyxin B is batch-dependent and is indicated on the batchcontrol.

- Features**
- Working volume of 100 µl/well.
 - Useful for detection of compounds that interact with LPS and inhibit the binding of LPS on LBP.
 - Useful as ELISA for LBP to quantify LBP of human and various animal species.
 - Allows detection of compounds that react with LBP and inhibit LBP to interact with LPS.

**Typical
standard
curve**



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Principle	<ul style="list-style-type: none">▪ The Endoblock LBP ELISA is a ready-to-use solid-phase enzyme-linked immunosorbent assay based on the sandwich principle with a working time of 4 hours.▪ The efficient format of 1 plate with twelve disposable 8-well strips allows free choice of batch size for the assay.▪ Samples and standards are captured by a solid bound specific antibody.▪ Biotinylated LPS will bind to captured LBP.▪ In case of testing the endotoxin inhibitory capacity, samples are pre-incubated with biotinylated LPS and added to the assigned wells.▪ If an endotoxin inhibitor is present in the sample, it competes with LBP for binding to LPS.▪ Streptavidin-peroxidase conjugate will bind to the biotinylated LPS.▪ Streptavidin-peroxidase conjugate will react with the substrate, tetramethylbenzidine (TMB).▪ The enzyme reaction is stopped by the addition of citric acid.▪ The absorbance at 450 nm is measured with a spectrophotometer. A standard curve is obtained by plotting the absorbance (linear) versus the corresponding concentrations of the standards, either LBP or Polymyxin B (log).▪ The LBP or inhibitory compound concentration of samples, which are run concurrently with the standards, can be determined from the standard curve.
Storage and stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least six months. After reconstitution the reagents are stable for 1 month if stored at 2-8°C.
Cross Reactivity	The Endoblock plate coated with anti-human LBP antibody cross reacts with LBP of man, sheep, pig, goat, rabbit, dog, rat, bovine and cynomologous monkey (not murine LBP). Be aware that culture supernatants samples contain LBP, when serum from one of the cross-reactive species is used, which will influence the test.
Precautions	For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and Federal rules in the use of this product. Hbt is not responsible for any patent infringements that might result with the use of or derivation of this product.
References	1. Geetha, C et al; Design and validation of anti-inflammatory peptides from human parotid secretory protein. J Dent Res 2005, 84: 149.
Also available	HIT302 LAL chromogenic endpoint assay, 3 x 96 determinations.

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